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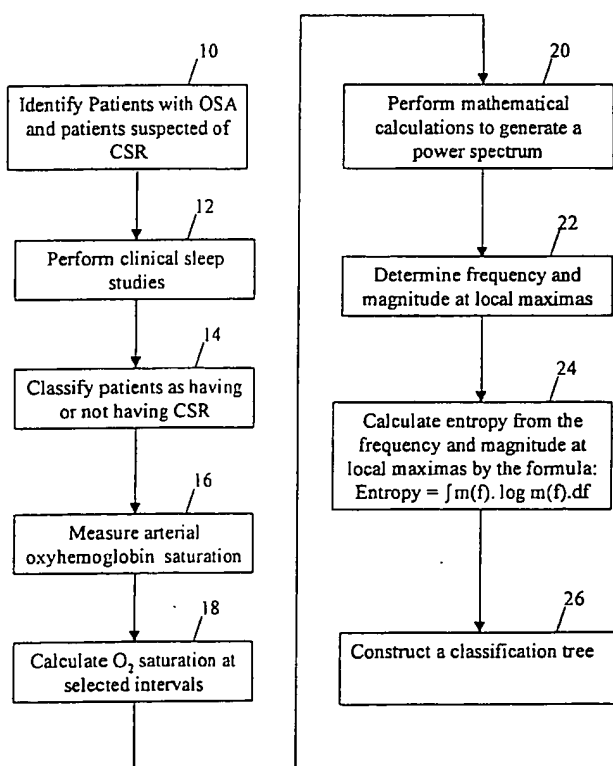
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[Continued on next page]

(54) Title: METHOD FOR DETECTING CHEYNE-STOKES RESPIRATION IN PATIENTS WITH CONGESTIVE HEART FAILURE



(57) Abstract: The present invention discloses a method for developing a diagnostic method for Cheyne-Stokes Respiration (CSR). The method comprises the steps of performing overnight oximetry recordings (16) in patients suspected of obstructive sleep apnea (10) who have been identified as having or not having CSR (14) by clinical studies (12). Spectral analysis (20) is performed on the oximetry recordings (16) from which a classification tree (26) is generated. The present invention also discloses a method for the identification of CSR in an individual. The method of identification comprises the step of performing spectral analysis of overnight oximetry recordings. The key features are then input into a classification tree to determine the presence or absence of CSR.

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patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/11680

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 5/00

US CL : 600/324

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/324, 309,310,322,323,326,331

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
New England Journal of Medicine, Journal of the American Medical Assn.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, P	US 6,223,064 B1 (Lynn et al.) 24 April 2001 (24.04.2001), column 3, lines 7-24; column 12, lines 6-57; column 23, line 3 to column 24, line 64	1-6
Y	Blackshear, J.L. et al. "Nocturnal dyspnea and atrial fibrillation predict Cheyne-Stokes respiration in patient with congestive heart failure", Arch Intern Med, 26 June 1995, Vol 155, No. 12, pages 1394-1400, Abstract	4-6
Y	Staniforth AD et al. "Nocturnal desaturation in patients with stable heart failure", Heart, 1998 April Vol 79, pages 394-399, Abstract	
A	Dowdell, W.T. et al. "Cheyne-Stokes respiration presenting as sleep apnea syndrome. Clinical and polysomnographic features", Am Rev Respir Dis April 1990, Vol. 141, No. 4, pages 880-884, Abstract	4-6
A	Hanly, P. et al. "Pathogenesis of Cheyne-Stokes respiration in patients with congestive heart failure. Relationship to arterial PCO2", Chest, 1993, Vol. 104, pages 1079-1084, Abstract	4-6
A,P	US 6,083,173 A (Grant et al.) 4 July 2000 (4.7.2000), entire document	1-3

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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document member of the same patent family

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/11680

**Continuation of Item 4 of the first sheet:**

The title is too long.

**NEW TITLE**

Method for Detecting Cheyne-Stokes Respiration in Patients

**Continuation of B. FIELDS SEARCHED Item 3:**

DERWENT, EPO, JPO, IBM TDB, MEDLINE

search terms: Cheyne-Stokes, oximeter, oximetry